ANDERSEN AFB, GUAM UTILITY SYSTEM DESCRIPTIONS

General: Strategically located on the northern portion of the Island of Guam, Andersen AFB occupies 20,000 acres of land. Andersen AFB covers an area roughly 8 miles wide and 2-4 miles long (24.5 square miles).

System Descriptions: Andersen AFB has three major utility systems that are under review for potential privatization: the electrical distribution, potable water production and distribution, and wastewater collection utility systems. (The Base does not have a natural gas distribution system.) The following is provided only to give an approximation of the size, scope and general description of the utility systems at Andersen AFB. Any numbers may be used for estimating purposes only.

Electric: The electrical distribution utility system at Andersen AFB is currently owned by the Air Force, and operated and maintained by the Navy civilian personnel. Andersen AFB purchases it electrical power requirements from the Navy and redistributes the electricity throughout the Base. Andersen AFB's electrical distribution utility system includes the following: 1 main substation, approximately 11.4 circuit miles of overhead primary distribution line, 20.6 circuit miles of underground primary distribution line, 15.0 circuit miles of overhead secondary distribution line, 12.4 circuit miles of underground secondary distribution line and 31,104 kVA of overhead and pad mounted transformers.

Potable Water: Andersen AFB produces, treats, and distributes an estimated 2.6 MGD. The Base's potable water system includes the following: 9 groundwater wells, chlorination and fluoridation equipment, 1 air stripper, 5 ground level storage tanks, 2 booster pump stations (BPSs), approximately 481,000 linear feet (91.1 miles) of piping, ranging in size from less than 2-inches to 30-inches in diameter, and 439 fire hydrants. Raw water is pumped from the groundwater wells via the BPSs and the potable water storage tanks to the on-base distribution system. Chlorine is injected into the water from 150-pound (lb.) cylinders and hydrofluoristic acid is added through chemical feed pumps to fluoridate the water. The water pressure within the system varies by location from 30 to 90 pounds per square inch (psi). The potable water mains include lined and unlined cast iron pipe (CIP), asbestos cement pipe (ACP) and polyvinyl chloride pipe (PVC). Andersen AFB completed upgrading all the potable water distribution lines within the Main Base family housing areas during 2001; approximately 83,000 linear feet (17.3 percent of the total) of the potable water distribution system was replaced. In order to reduce and/or eliminate calcium carbonate scaling problems, Andersen AFB is considering the installation of sodium hexametaphosphate systems at the Tumon Maui Well and the Marbo Wells Nos. 1, 2 and 3.

Sanitary Wastewater: Andersen AFB collects and conveys on average 1.0 MGD of wastewater (sewage) to GWA's system for treatment and disposal. The Base's wastewater collection system includes the following: 8 industrial grease traps, 17 oil water separators (OWSs), approximately 255,000 linear feet (48.3 miles) of piping, ranging in size from 4-inches to 20-inches in diameter, 495 manholes, and 6 sewage lift stations (SLSs) (5 with emergency generators). Andersen's collection system includes CP, TP, ACP, RCP, and CIP. It is predominantly a gravity flow system in which four main areas flow to the SLS, and ultimately discharges to the force main connected to GWA's wastewater treatment plant (WWTP). Andersen completed upgrading all the wastewater collection lines within the family housing areas during 2001; approximately 98,000 linear feet (38.4 percent of the total) of the wastewater collection system was replaced.

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